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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,621	02/21/2001	Hikaru Kouta	Q63282	4578

7590 03/30/2006

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, DC 20037-3213

EXAMINER
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KAO, CHIH CHENG G

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/788,621

Applicant(s)

KOUTA ET AL.

Examiner

Chih-Cheng Glen Kao

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2006 and 16 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (Optics Letters) in view of Bilodeau et al. (US 5495548), Komatsu (EP 1006683), and Canning et al. (US 5830622).

Kondo et al. discloses a method of modifying a refractive index or a waveguide having a core doped with GeO<sub>2</sub> and clad section (fig. 1) including condensing rays having a pulse width not more than 30 pico-seconds (page 646, col. 2, line 4) using an objective lens (fig. 1, lens next to "20X") to at least one of the core and clad section (page 646, col. 2, lines 1-5 and fig. 1), wherein the rays are irradiated, while scanned along the core at least one at a time, to the core section to modify the refractive index (fig. 1, "XYZ-stage"), and wherein the rays are irradiated for heating as well as modifying the refractive index so that a color center which is unstable in heat, is necessarily removed by heat generated by the irradiation of the laser rays based on a structural change of the core section, thereby making thermal treatment unnecessary (page 648, col. 1, lines 3-25).

However, Kondo et al. fails to disclose saturating the change of the refractive index, an array waveguide grating for WDM optical telecommunication and binding the divided rays, and

modifying the refractive index such that a ray having a specified wavelength is coupled to the waveguide.

Bilodeau et al. teaches saturating the change of the refractive index (fig. 2). Komatsu teaches an array waveguide grating for WDM optical telecommunication and binding the divided rays (fig. 3, #17). Canning et al. teaches modifying (fig. 3, #15) the refractive index such that a ray having a specified wavelength (col. 5, lines 1-8) is coupled (fig. 3, #21 and 22) to the waveguide (fig. 3, #10).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Kondo et al. with the saturating of Bilodeau et al., since one would be motivated to make such a modification to create a sharper grating than one that was changed only a fraction of that amount (fig. 2) as implied from Bilodeau et al.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Kondo et al. with the array grating of Komatsu, since one would be motivated to make such a modification for better controlling light (paragraph 1) as implied from Komatsu.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Kondo et al. with the modifying of Canning et al., since one would be motivated to make such a modification for better controlling (col. 5, lines 1-9) as implied from Canning et al.

2. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. in view of Bilodeau et al., Brienza (US 5066133), and Canning et al.

Kondo et al. in view of Bilodeau et al. and Canning et al. suggests a method as recited above.

However, Kondo et al. fails to disclose a fiber grating for diffracting a ray.

Brienza teaches a fiber grating for diffracting a ray (abstract, line 6).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Kondo et al. as modified above with the grating of Brienza, since these gratings were art-recognized equivalents at the time the invention was made in that they are both gratings for optical fibers. Therefore, the selection of any of these known equivalent gratings would have been within the level of ordinary skill in the art. One would be motivated to make such a modification for more easily directing light (col. 1, lines 14-20) as implied from Brienza.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 17 and 18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

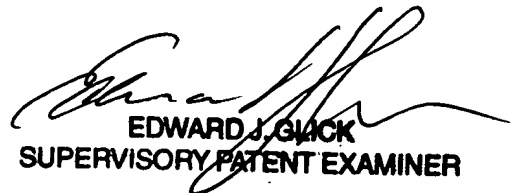
Art Unit: 2882

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gk



EDWARD J. GLICK  
SUPERVISORY PATENT EXAMINER